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Wartime Tracking of Class I Surface Shipments from Production or Procurement to Destination

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ABSTRACT

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This case study analyzes logistics doctrine and procedures, to include joint logistics, in wartime Class I sustainment. This analysis will encompass the entire spectrum from plan to execution and production to destination. Using the outstanding logistical efforts demonstrated during Operations DESERT SHIELD/STORM, the U.S. Army's ability to function as Executive Agent for Class I and how the Army can improve its ability to successfully accomplish the same mission in future conflicts.

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INTRODUCTION

Wartime Tracking of Class I Surface Shipments From Production or Procurement to Destination.

This case study analyzes logistics doctrine and procedures, to include the joint logistics, in wartime Class I sustainment. This analysis will encompass the entire spectrum from plan to execution and production to destination. I will use the outstanding logistical efforts demonstrated during Operations DESERT SHIELD/STORM, the U.S. Army's ability to function as Executive Agent for Class I and how the Army can improve its ability to successfully accomplish the same mission in future conflicts.

This evaluation of the logistical efforts during Operation DESERT SHIELD/STORM will obviously focus on U.S. Army participation but will cross into the joint arena due to the Army's mission to be executive agent for class I for all forces ashore. Although tremendous logistical challenges of sustaining over 400,000 troops were overcome, Operations DESERT SHIELD/STORM were an overwhelming success. For example, Saudi Arabia presented extended lines of communications and fortunately there were no significant enemy air or sea forces to contend with. The Host Nation was very

supportive and resource generous. The Saudi Arabians maintained one of the most modern sea port facilities and modern aerial port facilities yet the sheer magnitude of class I at the height of the build-up was staggering, thus adding to the choking of these facilities. There are a number of reasons why the ports became so congested so quickly. I will discuss each of these in this case study.

Having been involved at the Department of the Army level and working on Class I issues in support of Persian Gulf conflict, I have first hand knowledge of the problems encountered both in CONUS and the desert of Saudi Arabia. During the course of study this year, in the block on Strategic Freedom of Action and Logistics, Henry Eccles' book, *Logistics In The National Defense*, presents some very thought provoking ideas. Of real interest was the section on logistic momentum where he discusses a number of principles or points. One of these points is that, "A reporting system should be established in such a way that those who are responsible for the conduct of the operation and its logistic support know the precise state of supply availabilities."¹ The lack of a reporting system in Operation DESERT SHIELD/STORM is another of the points I will discuss in this study. Another of Eccles' points is regarding logistics responsiveness, "A point of danger is that a supply system may be geared too closely to

¹ Henry E. Eccles, Logistics In The National Defense, (Connecticut: Greenwood Press, 1959), p. 125.

peacetime operations; and that it may not be either technically or organizationally prepared for the very great changes that war brings."² This is another area that caused great stress in the build-up phase and will likewise be discussed further in this study. Another aspect that Eccles points out is, " an inadequate system of planning and controlling the allocation and movement of shipping in relation to overseas port capacity results in a pile-up of shipping in the overseas ports. This snowballs because there is an immediate resort to 'selective unloading.' This in turn reduces the efficiency of the unloading process; and this in turn causes further congestion. In the meantime, ships on the high seas must continue voyages to these congested ports because they are carrying urgently needed material; and loading plans in the continental U.S. ports become upset and confused and their operation becomes less efficient."³ This point will also be discussed in this study and at length because this particular point caused true congestion and near chaos in the port of Ad Damman, Saudi Arabia.

Additionally, I will discuss problems encountered with production of class I, the shipment and reporting, both from actual civilian contractors as well as from DLA depots. Encompassing all types of rations, the ration supplement sundry pack that usually is considered a class VI item but

² Ibid p. 126.

³ Ibid p. 127.

during Operation DESERT SHIELD/STORM due to the executive agent role and subsequent support to other services was considered as a class I item.

Even with the total success of Operation DESERT SHIELD/STORM there were large problems that obviously were not war stoppers but did cause confusion and stress that I believe was avoidable. These problems were overcome by dedicated logisticians on both sides of the world working long hard hours.

DOCTRINE AND ANALYSIS

Within a theater of operations, US Army forces are employed under a theater command. "The logistics organization of the US military in the theater is usually established along departmental lines with each service (Army, Air Force, and Navy) providing its own combat service support (CSS). However, the theater unified commander has "directive authority" for logistical operations within the theater, making sure assigned forces provide the most efficient and balanced support for the mission."⁴ As was the case in the Persian Gulf conflict, the theater commander directed the US Army to provide subsistence support to all assigned forces ashore. Actually this mission was to be Executive agent for class I beginning at C + 60 days. Within the Unified Command, Theater Army (TA) is the army component of the command and the CSS mission of the TA is to organize and operate the services needed to provide CSS to Army forces in the theater. Per Army doctrine, "the Theater Army headquarters (HQ) performs long-range planning in support of the TA and coordinates with Defense Personnel Support Center in CONUS on subsistence. TA HQ manages subsistence supply in the theater and provides an integrated system of general support supply and services."⁵ Doctrine states that a TA material management center, an

⁴ Headquarters, Department of the Army FM 10-60 Subsistence Supply and Management in Theaters of Operations, Washington, D.C., 29 December 1980, p. 2-1.

⁵ Ibid p. 2-2.

integrated inventory management center for the theater, is to provide the TA HQ with asset status information. This particular function was not utilized in Operations Desert Shield/Storm. The Theater Army Area Command (TAACOM) which is a major subordinate command of the TA, provides subsistence supply to units located or passing through the area of responsibility and to other forces as directed. Within the TAACOM there is a material management center (MMC) which per doctrine, "exercises centralized stock control over all TAACOM GS subsistence supply assets and controls activities in the COMMZ through knowledge of daily subsistence activities. The MMC is connected electronically with the movement control center (MMC) and the TA headquarters MMC. Requisitions flow directly from the TAACOM MMC to the TAMMC."⁶ The TAACOM MMC was a late arrival in theater due to sequencing of the TPFDL and consequently never was an active player in the doctrinal functions. As reported in the Washington Post on 11 November 1990, "Because military leaders put so much emphasis on dispatching combat troops into the region first, some major logistics units needed to support those forces still have not arrived."⁷ In fact, the requisitions were placed by Headquarters Department of the Army personnel. The fact that the theater MMC was not in the requirements generation loop or the requisition loop was a contributing factor that caused the

⁶ Ibid p.2-3.

⁷ "Logistics Bedevil U.S. Gulf Forces...New Troops to Stretch Supply Lines Further" The Washington Post, 11 November 1990, sec. A, p4. A1.

Army to have much difficulty in performing the executive agent role.

Additionally, Army doctrine for subsistence supply and management does not adequately address Executive agentship. In the case of Operations DESERT SHIELD/STORM, requirements were based on the targeted troop strength in theater. Initially, all types of operational rations were shipped to theater and with the intention of the rations being issued in the theater to each service. It became readily apparent that this was not going to work. Specifically, with the Army Field Feeding System (AFFS) designed around the Meal, Ready-to-Eat (MRE) and the Tray Ration (T-Ration) and of course manned accordingly - and the other services accustomed to B-Rations and A-Rations and only utilizing MREs in a hot scenario, it did not take long to overload the system. Joint doctrine must be developed and exercised to ensure both understanding and execution of executive agentship. Each Service must have a clear understanding prior to deployment. This can only be accomplished with complete understanding of each Services' requirements and development of procedures that are executable. Inclusive of how supported Services get their supplies and what information must be provided for support. The lack of this type doctrine was obvious in Saudi Arabia and again added to the confusion.

Ms. Molly Moore, a Washington Post staff writer, reported in her 11 November 1990 article on logistics in Saudi, "already, 132 ships have dumped more than 7.5 million tons of weapons, ammunition and equipment on the docks of Saudi Arabia and aircraft have flown more than 4,600 missions delivering more than 170,000 passengers and 159,000 tons of equipment to the kingdom, according to military reports."⁸ With an average of 500 seavans (40 foot equivalents) per week arriving prior to the 8 November decision to send an additional 200,000 troops and then an average of 1000 seavans per week later, a solution had to be found.

The solution was to attempt throughput distribution to units by identifying the seavans to units. This would alleviate the need to "unstuff" the van and sort the commodity. This effort ran astray when it was discovered that the vans and their contents were being erroneously reported by container number. The system was for each shipping activity, regardless of whether it was a DLA depot or a contractor, to report the container number, the commodity or commodities and quantity, the vessel booking, voyage number, and estimated time of arrival to the DPSC transportation office. DPSC would in turn send out a weekly message to the theater to provide some valid planning forecasts. What in fact happened, in a few cases, was that vans reported to be rations were actually

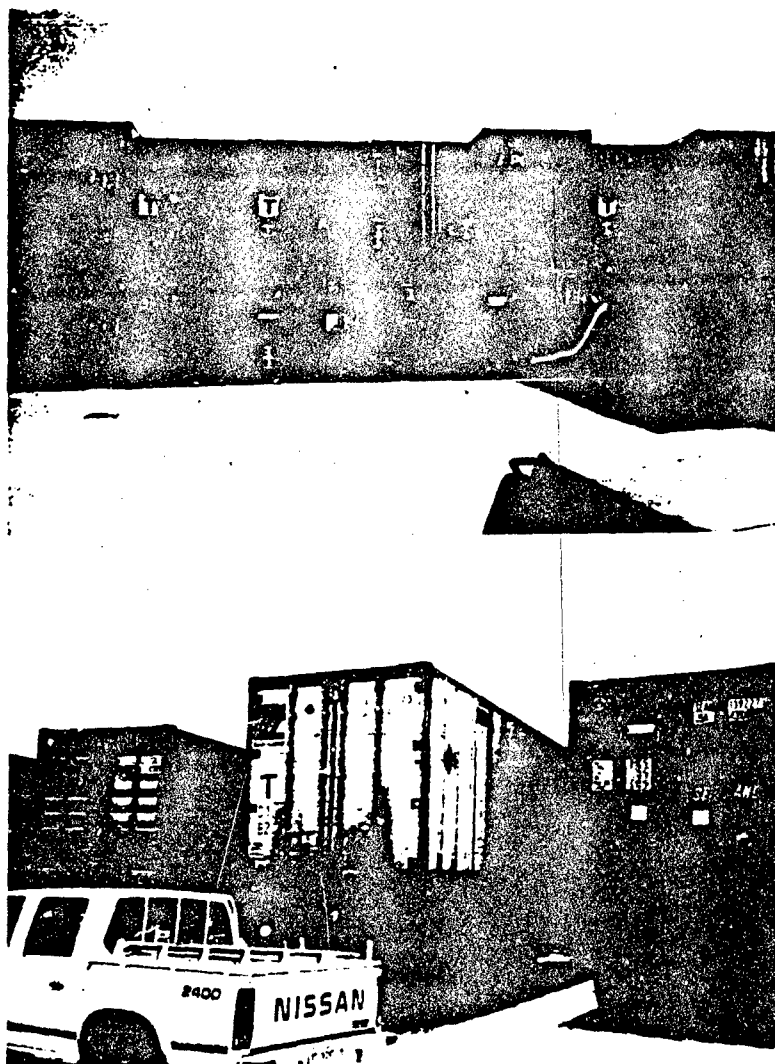
⁸ "Logistics Bedevil U.S. Gulf Forces...New troops to Stretch Supply Lines Further," The Washington Post, 11 November 1990, sec. A, p. A29.

general supplies. The Washington Post reported on a GAO report release concerning this subject: "But the report said serious problems developed during the subsequent, months-long buildup, as the U.S. Central Command sought to 'push' massive amounts of equipment and supplies into the Persian Gulf - often before the units that would use them had even deployed. U.S. troops at Saudi ports lacked equipment and training to unload the ships, and in many cases supply officers had only a general idea about what type of cargo [the ships were] carrying. Shipping records were missing or incomplete."⁹ These incidents caused a complete distrust in the system.

On the next page is an example of a DPSC message reporting what was originally believed to be rations.

⁹ "Logistical Shortcomings of 'Desert Storm' Cited...GAO Report Details Operation's Problems," The Washington Post, 31 December 1991, sec. A, p.A10.

As a result of theater complaints and realization that the messages were in some cases erroneous, DPSC transportation as an additional remedy or solution, procured decals to affix to the exterior of the seavans at the shipping activity to further aid in identification. The photos below are examples taken at the port of Ad Damman staging facility, showing these decals.



This initiative greatly assisted the theater but was too late.

I contend that the port congestion problem could have been greatly reduced if the shipping activities had followed the procedures as set forth in DoD manual DoD 4500.32R volume I, Military Standard Transportation And Movement Procedures (MILSTAMP). For instance, commodity codes were indiscriminately used and trailer 9 record cards were often not used. More guidance or at least strict adherence to procedures might well have eased the congestion and wear and tear on logisticians.

Headquarters, U.S. Army Materiel Command took action 24 September 1991 to correct the commodity code problem by initiating a proposed change and additional commodity codes for class I items. These changes are more specific and if used correctly will prevent a similar type problem from reoccurring. Below are examples of these codes, both the old and the requested clarification.

<u>CODE</u> *	<u>EXPLANATION</u> *
<u>OLD</u>	<u>NEW</u>
500	Deleted
51A	Subsistence, NOS (not otherwise specified)
	Meals, Combat
	Meal, Ready-To-Eat (MRE)
	T Ration, Breakfast
	T Ration, Dinner
	B Rations, Breakfast (unitized)
	B Rations, Dinner (unitized)
	B Rations, Hospital
	Meal, Ordered Ready-To-Eat, Candy
	Meal, Ordered Ready-To-Eat, Main Entree
	Meal, Ordered Ready-To-

	5MP	Eat, Fruit Meal, Ordered Ready-To-Eat, Pudding
	5MS	Meal, Ordered Ready-To-Eat, Soup
	5MU	Meal, Ordered Ready-To-Eat, (Unitized)
	5PB	Pouch Bread
51J		Combat Rations, Sundry Pack
	51J	Sundry, Type I
	51K	Sundry, Type II
	5GP	Gift Packs

*The old codes and explanations were taken from the DoD MILSTAMP manual DoD 4500.32-R Vol.1, 15 March 1987. The new codes and explanations were taken from the HQ AMC letter requesting changes to DoD MILSTAMP manual, dated 24 September 1991.

Even with all these improvements, if shipping activities are not required to use them - we will never learn from our mistakes, or improve the ration distribution system.

The use of these codes is simply described in appendix F of the MILSTAMP manual. The one area that was completely overlooked by the shipping activities was the use of commodity codes with NOS (not otherwise specified) in the description. The MILSTAMP manual addresses the actions to take when using NOS, "Whenever an 'NOS' commodity code is used, additional explanation is always included as a trailer entry using DI T_9. This explanation is not a reiteration of the description shown in this paragraph (e.g., Subsistence, NOS; General, NOS), but may be a clear text description such as 'Exchange Resale Items - Consolidated.'"¹⁰ For some reason this procedure was completely overlooked.

¹⁰ Department of Defense, DoD 4500.32-R, Volume 1, MILSTAMP, Military Standard Transportation And Movement Procedures, Washington, D.C., 15 March 1987, p. F-12.

Another problem area was the use of containerized feeder vessels. When the theater was informed of vessel bookings there was no mention of transshipment. Consequently, the MMC personnel were on the look out for vessels that never made port of calls in theater. The shipping companies would use large container vessels from CONUS to various transship points and then utilize smaller vessels (feeder vessels or transshipment vessels) to continue to the theater. These smaller vessels could not carry the entire load and the visibility of cargo was again lost at this stage. Below is a copy of one of the Military Traffic Management Command's Desert SHIELD Sustainment Cargo Summary Report showing the transshipment port, date, and vessel based on original vessel. This report was not available to the theater. However, HQ DA attempted to keep the theater MMC informed by passing some of this information to them by utilizing electronic mail.

DESERT SHIELD SUSTAINMENT CARGO SUMMARY REPORT

VESSEL	VOY #	CARR	ETD	EAST	BOOKING TOTALS				TRANSSHIPMENT	PORT	DATE	VESSEL	POD ARRIVALS			
					20'	40'	REEFER	DECK					POT	POT	POT	POT
Batavia (35)	A6157	SLMD	2 Mar	192	88	677	52	0	KAO	03/13	Liberta	03/19	48	03/26	03/27	12 03/25 26
Allison (152)	A6128	LYEE	3 Mar	111	8	373	0	0	Bare					03/20		
Pres. Hoover (113)	P4075	APL	3 Mar	302	0	227	0	0	P04	03/31	Rapide 13			04/01		
Alamita (30)	A6152	LYEE	3 Mar	109	1	0	0	0	P04	04/03	Ville De Pluton			04/05		
Pres. Washington (79)	P4081	APL	3 Mar	483	0	56	0	0	P04	04/07	Rapide 14			04/08		
Discovery (4)	A6261	SLMD	7 Mar	109	8	244	5	0	KAO	03/17	180			03/30		
Pres. Truman (32)	P4082	APL	7 Mar	302	84	623	1	0	P04	04/07	Rapide 14			04/08		
Pres. Tyler (110)	P4083	APL	8 Mar	302	0	163	0	0	P04	04/07	Rapide 14			04/08		
Tyson Lake (Co)	A6163	LYEE	9 Mar	181	1	101	0	0	P04	04/09	Ville De Pluton			04/13		
Argonaut (112)	A6212	FAAA	15 Mar	192	3	214	0	0	PJA	04/09	Ville De Pluton	04/05	75	04/13	04/14	2
Pres. Madison (175)	P4095	APL	10 Mar	403	0	43	0	0	P04	04/14	Rapide 15			04/15		
Margaret Lykes (65)	A6205	LYEE	13 Mar	109	0	59	0	0	P04	04/10	Ville De Pluton			04/15		
Esp. Friedman (164)	A6213(1)	FAAA	13 Mar	192	2	104	0	0	P04	04/09	Ville De Pluton	04/04	8	04/14 (1)		
Achilles (31)	A6158	SLMD	14 Mar	192	35	606	0	0	KAO	03/26	Adventure/Exlimar	03/30	19	04/06	04/07	5 04/04 8 04/04 2
Pres. Jackson (27)	P4096	APL	14 Mar	302	7	583	1	0	P04	04/14	Rapide 15			04/15		
Pres. Grant (112)	P4096	APL	15 Mar	302	0	69	10	0	P04	04/14	Rapide 15			04/15		
Pres. Lincoln (81)	P4114	APL	17 Mar	403	0	4	0	0	P04	04/21	Rapide 16			04/22		
Pres. Roosevelt (64)	P4115	APL	21 Mar	302	4	581	0	0	P04	04/21	Rapide 16			04/22		
Independence (135)	A6271	SLMD	22 Mar	192	1	34	0	0	KAO	03/30	Pioneer/World Lynx			04/14	04/15	5
Resolute (41)	A6214	FAAA	24 Mar	192	0	10	0	0	LET	04/08	Copeland			04/29 MEU		
Bowell Lykes (65)	A6256	LYEE	26 Mar	109	0	37	0	0	P04	04/19	Ville De Mascate			04/22 MEU		
Pres. Adams (26)	P4141	APL	27 Mar	305	1	330	0	0	P04	04/28	Rapide 17			04/29		
Valon (33)	A6225	SLMD	28 Mar	192	30	80	0	0	KAO	04/06	Japan Sea	04/13	58	04/20		
Pres. Polk (49)	P4156	APL	4 Apr	302	0	133	0	0	KAO	04/05	Rapide 18			05/06		
Batavia Bay (35)	A6226	SLMD	6 Apr	192	0	12	0	0	KAO	04/15	Liberta			04/28		
Pres. Truman (31)	P4165	APL	11 Apr	302	0	170	0	0	P04	04/12	Rapide 19			05/13		
Pres. Kennedy (74)	P4186	APL	18 Apr	302	0	110	0	0	P04	04/19	Rapide 20			05/20		
Pres. Roosevelt (65)	P4191	APL	25 Apr	302	0	27	0	0	P04	05/27	Rapide 21			05/28 MEU		

Total Booked 273 5572 49 0

UNBOOKED CARGO ***

Booking Off:	Containers	Breakbulk	Remarks
20'	40'	REEFER	
Beyenne			
Grand Haven			
Boyle			

Notes: Scheduled arrivals of commercial ships subject to change.
 * Arrival Confirmed
 * Change from previous report.
 ** Advance bookings are based on cargo availability at origin.
 *** Includes all cargo received by CCB reporting day that has been offered but not accepted by an ocean carrier.
 (+) See booking activity report for multiple feeder vessels.
 (1) Cargo booked on this vessel will be lifted by Argonaut (102).

As the buildup progressed and the port congestion worsened, the theater made the decision to selectively call vans forward from the transload points. This again, caused problems in that containers were off-loaded and stacked in these transload facilities and to selectively request was very difficult and near impossible. Yet at the time and given the circumstances there was not another alternative. The port of Ad Damman was heavily congested and to continue off loading full vessels would only worsen the situation. Henry Eccles pointed out this problem in his book written in 1959. Of course, failure to follow instructions concerning ocean cargo identification caused much of this congestion.

BUILD-UP

At the onset of the conflict when the decision was made to deploy troops to the Persian Gulf, the PREPO vessels at Diego Garcia were activated and sent steaming to Saudi Arabia. At the same time, Headquarters, Department of the Army personnel were instructed to determine requirements based on the Time Phased Force Deployment List and send the requirements to Defense Logistics Agency's Defense Personnel Support Center with shipping instructions. These requirements were in addition to the unit basic loads that each unit deployed with. The initial thirty days was taken from wartime contingency stocks here in CONUS, containerized, and sent to the nearest port for shipment to Saudi Arabia. Simultaneously, rations were removed from the European Wartime Stocks, containerized, and shipped likewise. Additionally, rations were being airlifted as well. The important point at this time is that the theater Class I staff did not arrive in theater until approximately mid October. At this point, it was impossible to gather visibility of Class I.

In the context of the buildup, as we realized the production of operational rations (inclusive of increased contract quantities) could not keep up with planned theater strength we devised suitable alternatives. The *push* to get substitute rations in theater caused the system to continue to violate the same things or perpetuate the problems by

overstressing airlift and sealift. Initially, the most noticeable overstressing was with the airlift system, both in CONUS and in Saudi Arabia.

This case in point occurred in mid-November when it was determined that an additional source of rations was needed to achieve the CINC's stockage objective. Not only was reaching the stockage objective a problem but also getting the products in theater. Therefore, airlift became the only mode of transportation to use to achieve the requirement. Of course, at the same time, the airlift system was already stressed with trying to satisfy the theater with the other classes of supply. Additionally, the Class I community was attempting to provide the theater with traditional Thanksgiving and Christmas A-ration meals. These were planned well enough in advance that the bulk of the ingredients had been shipped via sealift. But there were some last minute requirements and they likewise competed for airlift.

This ration substitute was named the MORE, Meal Ordered Ready-to-Eat. Fortunately, this type meal had been tested in 1989 and, although not adopted for routine use sources of supply, were already identified which made the procurement action quicker. In less than 2 weeks DPSC had 4 million meal equivalents enroute to aerial ports for lift. Simultaneously, DPSC procured an additional 8 million meal equivalents and shipped them via sealift. The 8 million meal equivalents were

to be shipped in two increments: one to arrive the end of December and the other to arrive the middle of January 1991. During the same timeframe, the personnel at DLA depot operations and the operational rations personnel at DPSC were trying to put together a statement of work to use at Defense Depot Region West - Sharpe, to unitize the MORE ration. Unitization means to assemble all components to make a single meal and then modulate the meals into a pre-determined number of meals. This process took approximately 60 days to get underway.

The major problem with these MORE rations was that they were shipped as meal equivalents, the components to make up the ration were shipped separately with the intent of letting the theater assemble them into complete meals. The real question was, who in the theater was going to assemble these meals? The solution was to contract this effort in Saudi and then push those rations to the units. This alternative was successful and by the end of January, DLA was unitizing the MOREs for shipment to Saudi Arabia.

Another problem area was the ration supplement sundry pack (RSSP). These packs contain items required for the safety, sanitation, and minimum health and comfort of soldiers.¹¹ RSSPs are not a contingency stockage item and

¹¹ Headquarters, Department of the Army FM 10-27 General Supply in a Theater of Operations, Washington, D.C., 2 November 1984, p. 7-3.

consequently must be procured when required. There are two types of sundry packs:

- Type I for all soldiers
- Type II for females only

The problem incurred with these was that the commodity code used for shipping was the same regardless of type. As important as these were the theater did not have visibility of these either. Again there was indiscriminate use of the correct commodity code and this compounded the visibility problem. Again, the correct use of the commodity code in future requirements could ease the confusion. As a result of the lack of visibility, the theater changed the basis of issue to conserve what they had on hand. Again, correct utilization of the commodity codes would in all probability have corrected this situation.

Henry Eccles' point of logistics responsiveness was proven true during the Gulf conflict. The surge capability was not responsive enough and the MORE ration substitute was found. Without a valid reporting system the rations, as well as other commodities, flowed without the visibility of logisticians.

CONCLUSION AND RECOMMENDATIONS

General H. Norman Schwarzkopf, in comments about Operation DESERT SHIELD/STORM, has said that it was "... an absolutely gigantic accomplishment, and I can't give credit enough to the logisticians and transporters who were able to pull this off."¹² In a logistics case study concerning Grenada, one of the conclusions made was that, "in spite of these major shortcomings, operation URGENT FURY was a success because the soldiers were well trained and innovative; because individual leaders rose to the occasion, improvised and managed to overcome needless logistic obstacles; because the logistic lines of communication were short; because the enemy was poorly trained and equipped; and because combat operations were short-lived."¹³ This statement is very true and applies to Desert storm with one exception. The lines of communication were by no means short, yet this had little or no impact. For example, "during the first three weeks of the deployment, USTRANSCOM moved more personnel and equipment to the Persian Gulf than the United States transported during the first three months of the Korean War. By the end of the Desert Storm ground war on February 27, 1991, this command had moved over 485,000 passengers, 2.8 million tons of unit

¹² MG John R. Piatak, "MTMC Key to Strategic Mobility," Defense Transportation, "Operation Desert Shield/Storm Special Edition," (June 1991) p. 24.

¹³ National Security Fellows, GRENADA: Joint Logistical Insights for "No-Plan" Operations (1989) p. 59.

equipment, 6.5 million tons of refined petroleum products and 825,000 tons of sustainment cargo to the Persian Gulf."¹⁴ Another example of the massive movement during the conflict is, "the volume of ship traffic across the seas between the U.S. and the Persian Gulf became so great that sealift operations were frequently referred to as 'the steel bridge'. At its peak on December 30, 1990, the number of ships en route to the Gulf was 132, with 44 more ships returning from the Gulf and an additional 28 ships being loaded or unloaded at ports - equating to one ship every 50 miles across the ocean."¹⁵ Stated differently, "the same number of U.S. ships arrived in theater during the first five months of Operation Desert Shield as during the historic World War II convoy operations to Northern Russia during the 18 - month period, August 1941 to February 1943."¹⁶ With quantities of cargo being shipped at these rates it is no wonder that the ports became congested, especially when considering the fact that the cargo manifests for surface shipments were either missing, incomplete, or erroneous.

As a result of operation DESERT SHIELD/STORM, the Chief of Staff of the Army (CSA) mandated a study of the Total Distribution System (TDS) because a major shortcoming in the

¹⁴ "Desert Shield/Desert Storm: USTRANSCOM's First Great Challenge." Defense Transportation Journal, "Operation Desert Shield/Storm Special Edition," (June 1991), p.14.

¹⁵ Ibid p. 16.

¹⁶ Vice Adm. Francis R. Donovan. "Test of Sealift Planning for MSC." Defense Transportation Journal, "Operation desert Shield/Storm Special Edition," (June 1991) p. 60.

operation was in-theater distribution system. This study tasked the Deputy Chief of Staff for Logistics (DCSLOG) to :

- examine the entire distribution process
 - broaden the definition of distribution
- develop objective "Total Army" distribution system

This tasking was to focus on:

- asset visibility
- automation/communication
- field mobility
- movement management/control
- distribution optimization
- technology
- system discipline
- force structure
- standardization

With the primary goal of total asset visibility "origin to foxhole."

The primary thrust was dealing with Class V ammunition but was later expanded to Class I. This study is organized into functional area task force groups such as:

- senders
- movers
- receivers
- automation/communication
- industry and technology panel

to capture each viewpoint and address the views, issues and eventual fixes.

The main issues from the movers view for class I were :

- lack of shipment documentation
- lack of intransit visibility
- no distribution plan

Their fix is to establish a Global Transportation Network (GTN) so users can gain access to transportation information from any other user's data base.

The receivers' issues addressed:

- force structure
- requisitioning

The fixes were to develop theater-level force structure, develop and field an interface with transportation system to track ration movements and modify the TPFDL to deploy Class I staff and units to arrive in theater NLT 3 days prior to lowest Class I Unit Basic Load.

Finally, the industry/technology panels goal is to provide a forum to access the wealth of civil sector expertise and knowledge in logistics and transportation.

Lastly, the payoffs of the TDS, for the army, are:

- end to end distribution system
- asset visibility from source to foxhole

- effective and efficient logistics pipeline
- For the Commander
 - greatest degree of flexibility - would give the ability to know what, when, where and be able to manage change.¹⁷

The asset visibility would provide a reporting system as mentioned by Eccles in his discussion on logistics momentum. An important asset that was absent during Persian Gulf conflict.

At the TDS Senders Conference, 20-21 August 1991, MILSTAMP procedures were discussed and it was discovered that the shippers felt the use of the procedures would slow down the shipping process and cause a *bottleneck*. What actually occurred was that the product got in theater quickly but since the materiel manager on the ground in Saudi was not aware of the specific contents, expeditious management/distribution decisions could not be made. Mr. George Hayashi, President of American President Lines, in his article "Intermodalism Pays Off in the Gulf War," confirms the need for commodity identification. He states, "an operational failure occurred at Damman because the contents of offloaded containers could not be identified, and the port in one instance came to a halt for 11 days so containers could be opened. The military books much of its cargo as generic "N.O.S." (Not Otherwise Specified), and its documentation and internal processes were

¹⁷ Total Distribution System In Process Review, 3 October 1991.

unable to keep pace with the unprecedented volumes of cargo moved."¹⁸ Yet, in a special Association of the U.S. Army (AUSA) report on Strategic Mobility in December 1989, it was stated that command, control and management of shipping has made major strides. "Command, control and management of shipping has evolved most creditably since the days when Pusan dockworkers piled tons of 'Fragiles' in one location, 'Handle With Care' in another and 'Use No Hooks' somewhere else. Today traffic managers can tell at any time what shipment is where, when it will arrive and how it goes on from there. There is every reason to believe that military traffic management will not be a bottleneck in the transportation system of the future."¹⁹ Obviously, the TDS has a different viewpoint which hopefully will be implemented and will produce a different outcome in future conflicts.

The industry/technology panel of the TDS should recruit Mr. Hayashi, President of American President Lines. In his article, "Intermodalism Pays Off in the Gulf War", he made a number of recommendations to strengthen the working relationship between the military and the liner sector, and improve results in time of national emergency. One of particular importance he states is "utilization of existing systems: APL and other carriers should continue to work with

¹⁸ George Hayashi. "Intermodalism Pays Off in the Gulf War," Defense Transportation Journal, "Operation Desert Shield/Storm Special Edition," (June 1991): p. 65.

¹⁹ Special Report, Association of the US Army, "Strategic Mobility - Getting There is the Big Problem." (December 1989): p. 16.

TRANSCOM, MTMC and MSC to effectively demonstrate full capability of the integrated transportation and distribution systems offered by the industry. Encourage the military to utilize not only the ships but also the related intermodal and information system (including commodity - identification and cargo - tracking capabilities, as well as logistics expertise) of the U.S. flag liner sector."²⁰

In conclusion, the overall success of Operation DESERT SHIELD/STORM cannot be overstated. Yet, there were problems, especially in the Class I arena, that fortunately were not war stoppers. But, what if this conflict had occurred in a country without the infrastructure of Saudi Arabia, or a country that was not friendly to the U.S. ? It is time to take heed and correct our deficiencies. It has been taught throughout this year that *those who fail to learn from history are destined to repeat it.*

All aspects of the Total Distribution System study are dealing with the type problems encountered with Class I. Hopefully, the down-sizing of the military will not cause this study to be discontinued or just put on the shelf. This study has effects on the entire supply system, not just the class I system, and if implemented could help ensure logistical success in the next conflict.

²⁰ George Hayashi, "Intermodalism Pays Off in the Gulf War," Defense Transportation Journal "Operation Desert Shield/Storm Special Edition," (June 1991): p. 66.

Joint doctrine must be developed to adequately address the executive agent responsibilities. This doctrine then must be exercised to ensure that each Service understands the requirements for support. There is a weak link in joint doctrine today that needs resolution prior to any future conflict.

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